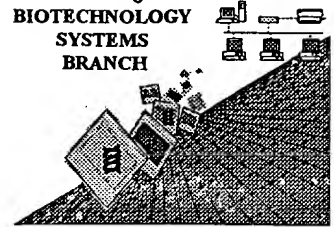


Partner

RAW SEQUENCE LISTING ERROR REPORT

file
BIOTECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following CRF diskette:

Application Serial Number:

09/210,747

Art Unit / Team No. :

1641

Date Processed by STIC:

8/3/99

THE ATTACHED PRINTOUT EXPLAINS THE **ERRORS DETECTED.**

PLEASE BE SURE TO FORWARD THIS INFORMATION TO THE APPLICANTS BY EITHER:

1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANTS ALONG WITH A NOTICE TO COMPLY or,

2) CALLING APPLICANTS AND FAXING THEM A COPY OF THE PRINTOUT WITH A NOTICE TO COMPLY

THIS WILL INSURE THAT THE NEXT SUBMISSION RECEIVED FROM THEM WILL BE ERROR FREE.

IF YOU HAVE ANY FURTHER QUESTIONS, PLEASE CALL:

MARK SPENCER 703-308-4212

PAGE: 1

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,747DATE: 08/03/1999
TIME: 14:46:54

Input Set: I210747.RAW

This Raw Listing contains the General Information
Section and up to first 5 pages.

Does Not Comply
Corrected Diskette Needed

p.3

```
1 <110> APPLICANT: Briggs, Robert E.
2   Tatum, Fred M.
3 <120> TITLE OF INVENTION: Construction of Pasteurella Haemolytica Vaccines
4 <130> FILE REFERENCE: 295.77957
5 <140> CURRENT APPLICATION NUMBER: US/09/210,747
6 <141> CURRENT FILING DATE: 1998-12-15
7 <150> EARLIER APPLICATION NUMBER: 08/643,299
8 <151> EARLIER FILING DATE: 1996-05-08
9 <150> EARLIER APPLICATION NUMBER: 08/162,392
10 <151> EARLIER FILING DATE: 1993-12-06
11 <160> NUMBER OF SEQ ID NOS: 6
12 <170> SOFTWARE: PatentIn Ver. 2.0
13 <210> SEQ ID NO 1
14 <211> LENGTH: 1556
15 <212> TYPE: DNA
16 <213> ORGANISM: Pasteurella cf. haemolytica
17 <400> SEQUENCE: 1
18   tatgaggcat tactgcgtga aggcgtgatt gttcgctcga tagcaggtta tggaatgccg 60
19   aatcatttac gcattagtat gcctttaccg caagaaaacg agagattttt tactgcctta 120
20   ttgaaagtgt tagcttaaca agcggttacc ttttatgaaa attttacaaa tttaaagaga 180
21   aaaatgaaa aactaacttt aaccccgatt tcccgagtag aaggcgagat caatttacct 240
22   gggttctaaa gcctgtctaa ccgagcctta ttattagccg ccttagccac cggtagcact 300
23   caagtacca atttattaga tagtgatgat attcgacata tgctcaatgc cttaaaagcg 360
24   ttaggcgtga aatatgagct atcggacgat aaaaccgtct gtgtacttga agggattggg 420
25   ggagctttta aggttcaaaa cggcttatca ctgtttctcg gcaatgcagg caecggcaatg 480
26   cgaccacttg cagcagcatt gtgtttaaaa ggtgaggaaa aatcccaaat cattcttacc 540
27   ggtgaaccaa gaatgaaaga acgcccgaat aaacacttag tcgatgcttt acgccaagta 600
28   ggggcagagg tacagtattt agaaaatgaa ggctatccac cggttgcaat tagcaatagc 660
29   gtttgcaggg gcggaaaaagt gcaaattgac ggctcgattt ccagccaatt tctaaccgca 720
30   ttgctgatgt ctgccccatt agcggaaagg gatatggaaa ttgagattat cggtgatctg 780
31   gtatcaaaac cttatattga tattaccctt tcgatgatga acgattttgg tattacggtt 840
32   gaaaatcgag attacaaaac ctttttagtt aaaggtaaac aaggctatgt tgctccacaa 900
33   ggtaattatt tgggtggagg agatgcctct tctgcctctt atttcttagc ctccggtgcg 960
34   attaaggcag gtaaagtaac gggcattggt aaaaaatcga tccaaggcga ccgcttggtt 1020
35   gccgatgtgt tggaaaaaat gggggcaaaa atcacttggg gagaggattt tattcaagcc 1080
36   gagcaatccc cgctaaaagg cgtagatatg gatatgaatc atattcctga tgcggcaatg 1140
37   acgattgcaa caaccgcttt atttgccgaa ggagaaacag ttatccgcaa tttttataac 1200
38   tggcgggtaa aagaaaccga ccgcttgaca gcaatggcaa ccgaattgcg taaagtccgg 1260
39   gcagaggtag aagaagggga agaaggggaa gattttatc ggattcaacc gcttgcggtta 1320
40   gaaaacttcc agcacgctga aattgaaacc tataacgatc accgtatggc aatgtgtttt 1380
41   tcattaattg cgttatcgaa tacagaagtg acgatcttag atccaaattg taccgctaaa 1440
42   acgttcccga cttacttttag ggacttggaa aaattatcgg tcagataaaa gtaaaaaagg 1500
43   attcagaaaa ctgaatcctt tttacgtttt attgtggcag actaagccca accgct 1556
44 <210> SEQ ID NO 2
```

PAGE: 2

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,747

DATE: 08/03/1999

TIME: 14:46:54

Input Set: I210747.RAW

```

45 <211> LENGTH: 434
46 <212> TYPE: PRT
47 <213> ORGANISM: Pasteurella cf. haemolytica
48 <400> SEQUENCE: 2
49 Met Glu Lys Leu Thr Leu Thr Pro Ile Ser Arg Val Glu Gly Glu Ile
50 1 5 10 15
51 Asn Leu Pro Gly Ser Lys Ser Leu Ser Asn Arg Ala Leu Leu Leu Ala
52 20 25 30
53 Ala Leu Ala Thr Gly Thr Thr Gln Val Thr Asn Leu Leu Asp Ser Asp
54 35 40 45
55 Asp Ile Arg His Met Leu Asn Ala Leu Lys Ala Leu Gly Val Lys Tyr
56 50 55 60
57 Glu Leu Ser Asp Asp Lys Thr Val Cys Val Leu Glu Gly Ile Gly Gly
58 65 70 75 80
59 Ala Phe Lys Val Gln Asn Gly Leu Ser Leu Phe Leu Gly Asn Ala Gly
60 85 90 95
61 Thr Ala Met Arg Pro Leu Ala Ala Ala Leu Cys Leu Lys Gly Glu Glu
62 100 105 110
63 Lys Ser Gln Ile Ile Leu Thr Gly Glu Pro Arg Met Lys Glu Arg Pro
64 115 120 125
65 Ile Lys His Leu Val Asp Ala Leu Arg Gln Val Gly Ala Glu Val Gln
66 130 135 140
67 Tyr Leu Glu Asn Glu Gly Tyr Pro Pro Leu Ala Ile Ser Asn Ser Val
68 145 150 155 160
69 Cys Arg Gly Gly Lys Val Gln Ile Asp Gly Ser Ile Ser Ser Gln Phe
70 165 170 175
71 Leu Thr Ala Leu Leu Met Ser Ala Pro Leu Ala Glu Gly Asp Met Glu
72 180 185 190
73 Ile Glu Ile Ile Gly Asp Leu Val Ser Lys Pro Tyr Ile Asp Ile Thr
74 195 200 205
75 Leu Ser Met Met Asn Asp Phe Gly Ile Thr Val Glu Asn Arg Asp Tyr
76 210 215 220
77 Lys Thr Phe Leu Val Lys Gly Lys Gln Gly Tyr Val Ala Pro Gln Gly
78 225 230 235 240
79 Asn Tyr Leu Val Glu Gly Asp Ala Ser Ser Ala Ser Tyr Phe Leu Ala
80 245 250 255
81 Ser Gly Ala Ile Lys Ala Gly Lys Val Thr Gly Ile Gly Lys Lys Ser
82 260 265 270
83 Ile Gln Gly Asp Arg Leu Phe Ala Asp Val Leu Glu Lys Met Gly Ala
84 275 280 285
85 Lys Ile Thr Trp Gly Glu Asp Phe Ile Gln Ala Glu Gln Ser Pro Leu
86 290 295 300
87 Lys Gly Val Asp Met Asp Met Asn His Ile Pro Asp Ala Ala Met Thr
88 305 310 315 320
89 Ile Ala Thr Thr Ala Leu Phe Ala Glu Gly Glu Thr Val Ile Arg Asn
90 325 330 335
91 Ile Tyr Asn Trp Arg Val Lys Glu Thr Asp Arg Leu Thr Ala Met Ala
92 340 345 350
93 Thr Glu Leu Arg Lys Val Gly Ala Glu Val Glu Glu Gly Glu Glu Gly
94 355 360 365

```

PAGE: 3

RAW SEQUENCE LISTING
PATENT APPLICATION US/09/210,747

DATE: 08/03/1999

TIME: 14:46:54

Input Set: I210747.RAW

```

95      Glu Asp Phe Ile Arg Ile Gln Pro Leu Ala Leu Glu Asn Phe Gln His
96      370                      375                      380
97      Ala Glu Ile Glu Thr Tyr Asn Asp His Arg Met Ala Met Cys Phe Ser
98      385                      390                      395                      400
99      Leu Ile Ala Leu Ser Asn Thr Glu Val Thr Ile Leu Asp Pro Asn Cys
100     405                      410                      415
101     Thr Ala Lys Thr Phe Pro Thr Tyr Phe Arg Asp Leu Glu Lys Leu Ser
102     420                      425                      430

```

103 Val Arg

104 <210> SEQ ID NO 3

105 <211> LENGTH: 14

106 <212> TYPE: DNA

107 <213> ORGANISM: Artificial Sequence

108 <220> FEATURE:

109 <223> OTHER INFORMATION: Description of Artificial Sequence: Recognition
 110 sequence of restriction enzymes *PhaI* and *SfaNI* in
 111 the 5' to 3' orientation.

112 <400> SEQUENCE: 3

W-->

113 gcacnnnnnn nnnn

see item 10 on Evn Summary Sheet

14

114 <210> SEQ ID NO 4

115 <211> LENGTH: 14

116 <212> TYPE: DNA

117 <213> ORGANISM: Artificial Sequence

118 <220> FEATURE:

119 <223> OTHER INFORMATION: Description of Artificial Sequence: Recognition
 120 site for restriction enzymes *PhaI* and *SfaNI* in the
 121 3' to 5' orientation.

122 <400> SEQUENCE: 4

W-->

123 cgtagnnnnnn nnnn

14

124 <210> SEQ ID NO 5

125 <211> LENGTH: 31

126 <212> TYPE: DNA

127 <213> ORGANISM: *Escherichia coli*

128 <400> SEQUENCE: 5

129 ttcatggaat cccttgacgt tacaacccat c

31

130 <210> SEQ ID NO 6

131 <211> LENGTH: 25

132 <212> TYPE: DNA

133 <213> ORGANISM: *Escherichia coli*

134 <400> SEQUENCE: 6

135 aggctgcctg gctaaccgc gccag

25

PAGE: 4

VERIFICATION SUMMARY
PATENT APPLICATION US/09/210,747

DATE: 08/03/1999
TIME: 14:46:54

Input Set: I210747.RAW

Line ? Error/Warning

Original Text

113 W "N" or "Xaa" used: Feature required

gcatchnnnnn nnnn

123 W "N" or "Xaa" used: Feature required

cgtagnnnnnn nnnn

NOTICE TO COMPLY WITH REQUIREMENTS FOR PATENT APPLICATIONS CONTAINING NUCLEOTIDE SEQUENCE AND/OR AMINO ACID SEQUENCE DISCLOSURES

The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):

- ☐ 1. This application clearly fails to comply with the requirements of 37 CFR 1.825. Applicant's attention is directed to these regulations, published at 1114 C May 15, 1990 and at 55 FR 18230, May 1, 1990.
- ☐ 2. This application does not contain, as a separate part of the disclosure on paper copy, a "Sequence Listing" as required by 37 CFR 1.821(c).
- ☐ 3. A copy of the "Sequence Listing" in computer readable form has not been submitted as required by 37 CFR 1.821(e).
- ☒ 4. A copy of the "Sequence Listing" in computer readable form has been submitted. However, the content of the computer readable form does not comply with the requirements of 37 CFR 1.822 and/or 1.823, as indicated on the attached copy of the marked-up "Raw Sequence Listing."
- ☐ 5. The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- ☐ 6. The paper copy of the "Sequence Listing" is not the same as the computer readable form of the "Sequence Listing" as required by 37 CFR 1.821(e).
- ☐ 7.

Other: _____

Applicant must provide:

- ☒ An initial or substitute computer readable form (CRF) copy of the "Sequence Listing"
- ☒ An initial or substitute paper copy of the "Sequence Listing", as well as an amendment directing its entry into the specification
- ☒ A statement that the content of the paper and computer readable copies are the same and, where applicable, include no new matter, as required by 37 CFR 1.821(e) or 1.821(f) or 1.821(g) or 1.825(b) or 1.825(d)

For questions regarding compliance with these requirements, please contact:

For Rules Interpretation, call (703) 308-1123

For CRF submission help, call (703) 308-4212

For Patent In software help, call (703) 557-0400

Please return a copy of this notice with your response.